#### **South Africa**

# I. Current National Security Situation<sup>1</sup>

South Africa is a state in strategic transition and the South African view of its national security situation reflects that change.<sup>2</sup> The 1994 elections eliminated apartheid, inserted democracy, and initiated broad political, social, economic, and military reform. In parallel, South Africa has been forced to fundamentally rethink its security and defense policies. In the Cold War, South African security was heavily based on the defense of the country against the threat from the Soviet Union (because of her strategic position) and the preservation of apartheid. Since 1989, both the concept of an external threat and governmental views on security have changed. Security is no longer viewed as a purely military problem, but rather a much broader political, economic, social, and environmental issue, with the real threats viewed to be internal and non-military. Nevertheless, there are some concerns stemming from instability and conflict elsewhere in the region. South Africa now has large numbers of refugees that exacerbate her domestic problems, a large amount of war material that has created an increased trade in small arms, and drug flows from her strategic position on international lines of communication.

#### Military requirements

South Africa's military forces have also undergone substantial change within the last five years.<sup>3</sup> The changes have been positive and have resulted in public support for the military. The original South African Defense Force (SADF) was established in 1957. By the late 1970's it had become a modern force with advanced weaponry. The South African Defense Force was the region's most potent military force, albeit one which for years had been focused upon counterinsurgency and support to the Angolan "democratic" guerilla movement of Jonas Savimbi against the Marxist Soviet–backed government.

By 1994 the Angolan insurgency had ended and the new South African Mandela government initiated the creation of a new military force, the South African National Defense Force (SANDF), to replace the old one. Within South Africa at the time there were actually seven different military forces—some defending apartheid, and some created because of it—and they had to be integrated into a single military institution under new civil-military controls. In 1996 South Africa stated as a matter of declaratory policy that she has no aggressive intentions toward any state, will comply with international norms, and that the SANDF will be oriented toward defensive defense and associated forces. A subsequent 1997 Defense Review called for a small peacetime force, supported by reserves and a mobilization capability, with a core tri-service force of advanced military systems.

To meet its new role, force modernization is required. As a minimum the SANDF is facing block obsolescence of much of its armament.<sup>4</sup> Over the next several years, South Africa needs to replace its Oliphant Main Battle Tank, procure new armored personnel carriers and logistics vehicles, and establish a blue water naval capability with new corvettes and maritime patrol aircraft.<sup>5</sup> Toward these ends, in 1998 South Africa announced a \$5B seven-year strategic naval rearmament program focused on the procurement of 6 strike aircraft, 4 corvettes, 4 maritime patrol headquarters, 40 light utility helicopters, 24 fighter trainer aircraft, and 28 advanced light fighters.<sup>6</sup>

#### Defense budget

South Africa has the largest defense budget in Southern Africa. In 1997, South Africa's military expenditures were \$2.3B (1997\$US) compared with expenditures of \$4B (1997\$US) in 1991.<sup>7</sup> This level placed South Africa 44th globally. In 1999, South Africa announced plans to boost defense spending substantially over the next three years, principally to fund the strategic rearmament program.<sup>8</sup>

### II. National Defense Industrial Base

South Africa's defense industrial base originated in 1940. It started with six factories established with British help that produced or assembled ammunition, armored vehicles, and electronic equipment. During WW II several private companies also produced armaments, but most weapons factories were closed down in the late 1940's. In the 1950's a fledgling defense industry was reborn, and in 1960 a new governmental initiative focused on increasing defense production levels and importing foreign armaments and component systems.

In 1964 South Africa established the Armaments Production Board and in 1968 created the state-owned Armament Development and Production Corporation. In 1977 the Production Board and the Corporation were merged to form Armscor. By 1989 the industry had expanded considerably and the country had reached near self-sufficiency in terms of the needs of the South African Defense Force. It had also reached the stage of independent R&D and production of less sophisticated weaponry and limited R&D in the production of advanced weaponry. The defense industrial base was also now distributed between the public sector (Armscor) and the private sector. In 1989, Armscor was the 30<sup>th</sup> largest company in South Africa and had subcontracts with 2271 private sector firms, mostly affiliated with the large diversified corporate groups that dominated South African industry.<sup>9</sup>

South Africa's arms industry became one of the largest in the developing countries. During the years when South Africa was isolated politically, the defense industry also became one of the leading economic sectors, contributing, by the late 1980's, about 20 percent of total manufacturing output, with armaments the leading manufacturing export. The industry also became the key repository of South Africa's scientific and technical skills.<sup>10</sup>

#### Leading companies

Currently the defense industrial base is dominated by state owned Denel, created from the manufacturing capabilities of Armscor in 1992, and three private sector companies-Reunert, Grinaker Electronics, and Altech Defense Systems. Denel is the largest, with about 13,000 employees. Its products are in four business areas: aerospace, heavy ordnance, light ordnance, and commercial/IT business. Reunert is a parent company for several companies operating in the South African defense, telecommunications, consumer electronics, and electrical engineering sectors. It has organized its defense activities into two groups, one focusing on armored vehicles, and the other on defense electronics.

Grinaker Electronics consists of five different companies focused on defense electronics, with special interests in electronic warfare, communications equipment, and navigation systems. Altech Defense Systems, which is 50 percent owned by Thompson CSF (France), is organized into two divisions focusing on: naval combat suites, subsystems, and systems upgrades; and command and control systems, trainers, and simulators. Two important smaller companies are ATE, which concentrates on avionics, fire control systems, and mission planning computers, and AME, concentrating on monitoring systems, recorders, and guided weapons and radar-absorbent materials research. <sup>11</sup>

### South African Global Top 100 Defense Industries

In 1991 South Africa had no companies in the global top 100 defense industries as measured by annual defense revenue. Denel appeared in the list in 1995 (50<sup>th</sup>), 1996 (60<sup>th</sup>), and 1998 (54<sup>th</sup>), but dropped from the list in 1999. Denel's annual defense revenues during the three years in which it appeared on the list peaked at about \$700M (1995\$US) in 1995, dropping to about \$500M in the other two years.

#### **III.** National Armament Strategy

Before 1963, South Africa depended heavily on arms imports. However UN antiapartheid embargoes in 1963 and 1977 caused the country to embark on a path of self-sufficiency. Between 1968 and 1977 South Africa began minor R&D, modifications to armaments produced locally under licensed production, and limited production of less advanced weapons. In order to circumvent the initial voluntary UN embargo of 1963, South Africa heavily imported dual-use equipment, technology, and manufacturing techniques and learned to incorporate those into armament systems via redesign, retrofit, and upgrade. Before the UN embargo became mandatory in 1977, South Africa also received military technology via licensing agreements, especially with West Germany, Italy, Israel, France, Belgium, and Canada. There was extensive licensed and coproduction in the 1970's and 1980's. South Africa also invested in foreign strategic industries, recruited foreign specialists to help design, develop, and manufacture armaments, and resorted to covert practices to obtain needed capabilities.

By the 1980's the defense industry was one of the leading industries in the developing world. At the same time, it could not design and produce advanced high-performance combat aircraft, tanks, and defense electronics. South Africa had also developed a substantial capability to perform system upgrades, focusing on the modification of existing equipment to be able to perform in the tough South African environment. Older systems were cannibalized to make new systems as part of the process, a practice that is expected to continue.<sup>14</sup>

## New defense industrial strategy

In 1994, the future of South Africa's defense industrial base was debated within parliament. The vehicle for the debate was a draft document, *The National Policy for the Defense Industry*, which was prepared by Armscor. Proponents emphasized the strategic value of the country's defense industrial base, the importance of strategic independence, and the added value of job creation and foreign currency from arms exports. At the same time, complete self sufficiency was no longer viewed to be necessary, although core production areas should be maintained domestically. These areas include logistic support and the design, development, systems, integration and testing capabilities of the military electronics, guided missiles, artillery, and armored vehicles sectors.<sup>15</sup> These systems areas were also intended to be the core of South Africa's defense exports.

Defense industrial advocates also argued for a diversification policy that would allow defense companies to focus part of their assets on the civilian market, arguing that the civilian portion of the defense industry should comprise at least 40 percent. At the same time, it will be important for the government to try and protect domestic companies from foreign competition. Subsequently, the South African leadership decided to maintain a high level of defense industry and to increase arms exports, arguing the strategic value added in terms of national infrastructure development, employment, and foreign currency.

#### Strategic rearmament

In 1998, the government initiated a strategic rearmament program.<sup>17</sup> This was motivated by growing regional instability and the strategic importance of the defense industry. The acquisition program, to be executed between 2002 and 2012, is a large one, and includes corvettes, submarines, fighters, advanced trainers, and helicopters. In the view of industry, this large acquisition program will also revitalize the defense industrial base, which had been strongly affected by the continuing decrease in South Africa's defense budget since 1989. The acquisition program would make it possible for the defense industries, which plan on developing, integrating, and maintaining many of the subsystems for their operational lifetimes, to restart R&D, enter alliances with global defense companies, and promote defense exports.

Subsequently, competitive international bids were initiated, with the awards eventually going to British, German, Italian, and Swedish firms. Losers included France, the Czech Republic, Spain, Canada, and some companies in Italy and Sweden. Although the awards

were announced in November 1998, in mid-1999 there was uncertainty introduced into the program because of the possibility of defense budget cuts that would affect program affordability. The government also initiated a study to scrutinize the proposed costs. In September 1999, the government finally approved plans for a \$4B purchase of 28 Gripen fighters and 24 Hawk fighter trainers from Saab-British Aerospace, 40 light helicopters from Agusta (Italy), 3 submarines from the German Submarine Consortium, and 4 corvettes from the German Frigate Consortium. The purchase of 4 Lynx maritime helicopters from GKN Westland (UK) was reduced to a lower priority and delayed. In December 1999, South Africa announced signing of the contracts, with a payment schedule spread over an 8-14 year period for affordability. Recently, it was disclosed that the South African government is also considering a possible re-competition of the GKN Westland award for the maritime helicopters.

#### Offset Policy

South Africa currently maintains a strong offset policy. Prospective foreign clients must demonstrate value- added benefits and local job creation, technology transfer, and the long-term viability of local ventures. One-time projects are of little interest.<sup>21</sup> Arms import programs are deliberately and explicitly being used to expand the depth and capabilities of the domestic defense industrial base, to ensure foreign investment, to expand exports, and to create jobs.<sup>22</sup>

South Africa's offset policy became law on September 1, 1996. It requires an offset of 50 percent of the imported value of the contract for any procurement over \$10M in size. This requirement must be fulfilled without increasing the purchase price of the contract. Preferred areas of counter-trade include R&D collaboration, exports of value-added goods and services, economic improvements to disadvantaged communities, human resources development, and technology transfer.<sup>23</sup>

Offsets were a decisive factor in the major awards made in 1998 to upgrade the South African Navy. The procurements were for seven-year programs to provide corvettes, submarines, utility and maritime helicopters, and trainer and fighter aircraft. In the procurement package, South Africa had indicated 22 different offset areas in which they wanted the bidders to concentrate. The procurement evaluation criteria were based equally on military/technical capabilities, industrial participation (i.e., offsets), and financial packages. Offsets were divided between national industrial participation (NIP) and defense industrial participation (DIP), which was further divided into direct DIP (directly connected to the system being proposed), and indirect DIP (investment/orders for the defense industry not related to the system being proposed). The DIP offers included a high level of South African defense industrial participation in subsystems, components, integration, testing, and licensed manufacture and assembly. NIP offers included an offer from Germany to build a stainless steel plant and mini-steel mill to help develop the Eastern Cape motor industry to world class levels.

For each award, three different contracts were prepared (all or none): the system contract, the NIP contract, and the DIP contract.<sup>24</sup> The total offsets from these procurements (total

value of about \$5B) were initially expected to result in a \$20B investment and 65,000 South African jobs over the next seven years. Subsequent assessments based on the actual awards judged that the economic benefit will actually be about \$12B over an 11 year period, with about 20 percent of the benefit accruing to local defense firms, 45 percent from counter-purchase of commercial products, and 35 percent from foreign investments in South African companies. Subsequent disclosures indicated that all of the bidders proposed systems that met the military and technical requirements, indicating the decisive nature of the offset program in the final decisions.

Although the awards will have a high local content, the winning companies will actually make the decisions and award the subcontracts to local participants. This places the burden on domestic industry to compete with each other and convince the bidders that they can perform in accordance with the required quality, price, and schedule conditions. This will be a new experience for many South African companies, who previously worked for either the South African government or for international customers obtained via Armscor. Subjecting South African companies to that experience is a deliberate objective of the government in order to improve domestic competitiveness. One of the earliest offsets resulting from these recent awards is the selection by BAE Systems of Denel to be a strategic supply partner for the design, development, and production of NATO-standard stores pylons for the Grippen fighter.

#### Arms import level

In 1997 South Africa's import level was only \$20M (1997 \$US), compared with \$396M (1997\$US) in 1991.<sup>30</sup> This level placed South Africa 84<sup>th</sup> in the world in arms imports. The new strategic rearmament program had not yet been initiated in 1997.

### IV. Perspectives on the International Arms Export Market

Before 1980 South Africa's only significant export market was Rhodesia.<sup>31</sup> During the early 1980's, the defense industry began to experience economic problems due to rising production costs, excess capacities, and a drop in domestic demand. Arms exports were initiated to try and mitigate these problems. A special division, Nimrod, was created within Armscor to concentrate on exports.<sup>32</sup> Nimrod began aggressive export marketing, first participating in major arms show in Greece in 1982 and in subsequent exhibitions in Chile, Turkey, and South Africa.

From 1982 to the 1994 elections, South Africa's principal customers were Third World governments or rebel groups in other pariah states, including Iraq during the Iran-Iraq war, the Pinochet regime in Chile, the Khmer Rouge in Cambodia, UNITA in Angola, and Renamo in Mozambique. South Africa's customers also included Peru, Morocco, Oman, Sri Lanka, Taiwan, South Korea, Israel, and Rwanda. In 1984 the UN Security Council unanimously adopted a resolution asking all states to voluntarily refrain from purchasing South African arms. <sup>33</sup> However the start of constitutional negotiations in 1990 improved South Africa's image abroad and arms exports rose to \$200M (1997\$US) by

1993.<sup>34</sup> When the UN lifted its arms embargo after the 1994 elections, Armscor announced a goal of doubling the country's share of the global arms market.<sup>35</sup>

Subsequently, South African companies began to take a higher profile in international arms exhibits. Armaments that were attractive on the world market included armored vehicles, artillery, small arms, and the Rooivalk helicopter. The Rooivalk is based on the Aerospatiale Puma airframe, heavily modified to include a full suite of on-board avionics and armaments.<sup>36</sup> Countries interested in the Rooivalk included Algeria, Australia, Finland, Malaysia, Saudi Arabia, Singapore, South Korea, and Spain.<sup>37</sup>

The 1996 White Paper reinforced South Africa's interests in the international arms market in order to facilitate cost-efficiency in the domestic defense industry and also reduce the unit costs of producing weaponry for the SANDF.<sup>38</sup> As a result, the South African defense industry has moved aggressively to expand its presence in the international marketplace. Africa and the Middle East were viewed to be important market areas for South African niche markets. Since then, the South East Asian countries have also become important marketing targets, especially Malaysia and Australia.<sup>39</sup> In 1997, South Africa's arms exports increased 34 percent. Sales expanded to India, Switzerland, Singapore, Colombia, and others.

#### Current marketing initiatives

The South Africa government has recently been seeking cooperative agreements with other countries, and India has become a principal focus. Currently, India is the largest importer of South African arms (R572 million) with Switzerland in a distant second place at R97 million. The first meeting of the Indo-South African Joint Committee on Defense Cooperation was held in August 1998. Artillery, small arms and ammunition, and maritime systems are among the leading areas of cooperative interest. In October 1999, during a trip to New Delhi, Defense Minister Mosiuoa Lekota announced that a defense cooperation accord would soon be finalized between the two countries that will encompass both joint production and research and development. In 1999 Armscor also led a delegation of about 20 South African companies to India's Defexpo India 99 exhibit, with Denel as the biggest exhibitor. South African companies were targetting a broad range of Indian armament needs.

Although India is South Africa's current largest external market, at the same time South Africa also supplies missiles to Pakistan, a historical customer, under an agreement signed in January 1998 to promote defense-industrial cooperation. <sup>42</sup> South Africa also has a major initiative with Malaysia. Although slowed down because of the Asian financial crisis, Malaysia is still a focus for marketing artillery, ammunition, helicopters, UAVs, combat turrets, communications equipment, and defense electronics. <sup>43</sup>

Strategic partnerships with major world players are also viewed to be vital for rapid and cost-effective entry of South Africa's defense industry into the world market. <sup>44</sup> Although the industry would like to compete in the US defense market, they are largely an unknown in the United States, and there has been no coordinate promotional effort to

raise the visibility. Part of the reason is historical; however another reason is that South African defense industry to date has concentrated on the African, Middle East, and Asian markets. Nevertheless, there is an intention to raise its visibility and target the North American market in the future. 45

In 1998 South Africa sponsored a major local arms exhibition, DEXSA '98, in which ninety South African companies and corporations from 21 other countries participated. A principal theme was the expertise of the South African defense industry, with demonstrations including the full range of South African armaments. Special areas of interest featured war-gaming and simulation, test and evaluation, peacekeeping operations, disaster relief, soldier systems, imagery and reconnaissance systems, naval mine and countermine warfare, and synthetic acquisition systems. In addition to armaments, the use of South Africa's test facilities also constitutes an important export service being offered to the world market.

### Export controls

Although actively promoting arms exports, the South African government is also concerned about their ramifications. The government, recognizing that arms exports are essential to survival of the defense industry, has tried to be avoid being viewed internationally as an "indiscriminate exporter." One aspect has been to assign responsibility for export control to a minister with no direct responsibility for defense: the current Chairman of the ministerial-level National Conventional Armaments Control Committee (NACC) is the Minister of Water Affairs. United Nations arms embargoes are "observed to the letter," according to the committee's chairman, Kader Asmal. As a matter of policy, land mines were forbidden for export as were weapons of mass destruction and related technologies. Improved arms control procedures were also initiated.

South Africa's export control policy is heavily focused on preserving regional balances, discouraging terrorism, and supporting the respect for human rights. <sup>50</sup> At the end of 1999, the *Draft White Paper on Defence-Related Industries* recommended strengthening government control of arms exports, to include the raising the NACC to the status of statutory body. <sup>51</sup>

### Arms export level

In 1997, South Africa's arms export level was \$370M (1997\$US), compared with only \$11M (1997\$US) in 1991.<sup>52</sup> This level placed South Africa 15<sup>th</sup> in the world in arms exports in 1997.

The export level decreased by over half in 1998. The largest customers in 1998 were, in order of volume, Algeria, Thailand, Switzerland, Columbia, UAE, the USA, Tanzania, Peru Brazil, and Romania. <sup>53</sup> Significant Indian revenues had not yet started to flow.

#### V. Transformations in the Defense Industrial Base

Several factors have caused a severe constriction in South Africa's arms industry. These include the cessation of hostilities in Namibia and Angola, severe cuts in defense spending and new arms control measures. In response to the overall situation, extensive restructuring has been underway throughout the last decade. The principal functions of Armscor were transferred to a new state-owned company, Denel, in order to allow the production facilities of Armscor to be used for commercial purposes, which was forbidden by state law. Armscor became a procurement agency and also concentrated on providing help in export markets.<sup>54</sup>

# The restructuring of Denel

In 1992 Denel underwent further restructuring. It reorganized its 18 divisions and subsidiaries into 6 groups: systems, manufacturing, aerospace, informatics, properties, and engineering. Staff was also reduced. All of these groups focused on diversification, both to commercial markets and to the arms export market. By 1993 Denel exported armaments to 41 countries, with artillery pieces being the main export product. In 1992-93 Denel accounted for 72 percent of South African defense industrial revenues, of which about 25 percent was from export sales. Denel also started to increase its diversification to non-defense markets. By 1994 about 25 percent of Denel's output was for the non-defense sector, and included mining equipment, industrial security, health care and medicine, and commercial products. Denel's goal was to increase that level to 60 percent over the next five years. The South African government viewed Denel's transformation as an important factor in stimulating the national economy and in helping position South Africa's industry for entry into the world market.

Subsequently, because of the difficulties of conversion to civilian markets, Denel focused on export markets and especially concentrated on joint ventures and strategic alliances with global firms. Nevertheless, Denel experienced serious financial difficulties as a result of continued reductions in South Africa's defense budget and strong international competition. In 1998, South African arms exports decreased by 50 percent over the previous year. Recently Denel's Rooivalk helicopter offer failed to make the shortlist in an Australian procurement, losing to the United States (Boeing's Apache Longbow), France (Eurocopter Tiger), and Italy (Augusta Scorpion).

Denel recently initiated another major restructuring effort to try and recover. The changes will result in staff reductions, closure of unprofitable divisions, restructuring the light and heavy ordnance division, consolidation of the information technology divisions, and an aggressive search for equity partners. Denel submitted its final restructuring recommendations to the government in May 2000. The plans call for aggressively seeking a foreign strategic partner to take a 20-30 percent equity position in Denel in order to provide capital, technology, sharing of R&D, market access, and participation in international programs. BAE Systems, EADS, and Thomson-CSF are leading contenders. Other foreign partners (e.g., Turbomecca (France)) would then be offered stakes in specialized aerospace segments. Additionally, Denel's information business will be

merged with other state-owned technology businesses as a publicly traded independent commercial firm. The artillery business and the commercial business will be kept as is for the moment.<sup>59</sup>

Although government owned, Denel has an independent chairman and board of directors from the private sector that have complete autonomy in management of the Denel divisions. The government has stated that Denel will be eventually privatized, with special interest in most urgently privatizing Denel Aviation and the information technology division, Ariel Technologies. However although Denel is moving toward partial privatization, South Africa has not yet engaged in the large-scale privatization necessary to attract investment, stimulate the economy, and create jobs.

### Other restructuring

In parallel with Denel, South Africa's private sector defense companies restructured. In 1994 the South African Defense Industry Association (SADIA) was created to coordinate the defense industrial base and to act as a spokesman for the industry. By late 1996 the armament manufacturers merged into the Aerospace, Maritime and Defence Industries Association, or AMD, as it is called locally. AMD's specific aims are to coordinate strategic thinking and planning in the defense industry and to stimulate its development both locally and internationally. In May 1998, the process of consolidation took another step with an MOU that was signed between AMD and the Defence Industry Interest Group of South Africa to form one body to represent all stakeholders and interest groups in the defense industry. This new organization represents about 95 percent of the companies involved in research, development, manufacturing and maintenance of aerospace, maritime and defense equipment.

Armscor has also focused on international marketing, with new overseas offices to assist the domestic arms export initiative. Armscor maintains offices in the United States, France, Russia, Switzerland, Israel, Malaysia, the UAE, and China and helps fund the participation of South African defense firms in international arms exhibitions. Ministry of Defense funds also support trade missions, government personnel attendance, and transportation costs for equipment at international exhibits. The government has also shifted the issuing of arms export permits from Denel to the Defence Secretariat and raised the offset requirement to the 60 percent level for foreign suppliers. In 1996, the SADIA companies had a total of 93 joint ventures with corporations in the US, France, the UK, Germany, and Malaysia. 66

#### Continued developments

South Africa continues to refine its defense industrial strategy. In December 1999, South Africa released a new *Draft White Paper on Defence-Related Industries*. Arguing that defense work is cross sector, involves civilian technologies, and has overlap with civilian production with a company, the paper drops the term "defense industries." The White Paper defines a comprehensive defense industrial strategy to include both an industrial policy and an arms control policy. The government is committed to "total political"

control" over the arms industry. Armscor relinquishes responsibility for marketing armaments abroad to a new Marketing Support Board that will include both government representatives from several Ministries and defense industry representatives.

Additionally, a new dedicated defense technology organization will coordinate and integrate defense research across public, private, and academic sectors. The purpose is to retain and enhance specific strategic technology areas related to two key themes: logistic and maintenance support; and integrating, adapting, and modifying equipment bought on the open market in order to provide a local combat advantage. The technology areas viewed to be key to these two theme areas are: systems integration; command, control, and communication systems, sensors and data processing, electronic warfare and strategic and tactical electronics, and combat system software. These technology areas and associated capabilities will be sheltered from market forces, with a limited amount of protectionism. The intent is to give South Africa a self-sufficient mid-life upgrade capability and also to retain armaments funds within South Africa without conceding R&D and production risks.<sup>67</sup>

The South African government currently believes that the changes in global defense markets and industries preclude the future viability of a small broad-based defense industrial base. There will be a need to focus on niche areas of robust demand in which companies can maintain their strengths. Subsequently, the industry has focused on two broad areas: products in which they believe they have a significant technological advantage (long-range artillery, secure tactical communications, mine detection, mine-protected vehicles, wheeled combat vehicles, some missile technologies, and electronic warfare), and areas of additional specific South African government interest (systems integration to insure an upgrade capability for combat vehicles, C3I systems, munitions, and support technologies). The industry also is actively seeking global alliances, trying to position itself as a niche supplier, and also to participate in cooperative R&D activities.

### VI. Risks and Concerns

- South Africa is concerned that its defense industry, viewed to be a key strategic component of the national economy, will not be able to survive and prosper under current market conditions.
- The pending block obsolescence of South African forces must be remedied if South Africa is to meet its current security needs.
- Although actively promoting arms exports, the South African government is also concerned about their ramifications. The government, recognizing that arms exports are essential to survival of the defense industry, has tried to avoid being viewed internationally as an "indiscriminate exporter."

### VII. Some Observations

- UN anti-apartheid embargoes in 1963 and 1977 caused the country to embark on a path of self-sufficiency. By the 1980's the defense industry was one of the leading industries in the developing world. At the same time, it could not design and produce advanced high-performance combat aircraft, tanks, and defense electronics.
- South Africa is a state in strategic transition and the South African view of its current national security situation, its armament strategy, and its defense industrial strategy reflect that change.
- The South African government currently believes that the changes in global defense markets and industries preclude the future viability of a small broad-based defense industrial base. Complete self sufficiency is no longer viewed to be necessary, although core production areas should be maintained domestically. There will be a need to focus on niche areas of robust demand in which companies can maintain their strengths.
- Arms import programs are deliberately and explicitly being used to expand the depth
  and capabilities of the domestic defense industrial base, to ensure foreign investment,
  to expand exports, and to create jobs.
- Because of the difficulties of conversion to civilian markets, Denel has focused on arms export markets and especially concentrated on joint ventures and strategic alliances with global firms. Strategic partnerships with major world players are viewed to be vital for rapid and cost-effective entry of South Africa's defense industry into the world market.
- South Africa has cooperative arms agreements, and is an active supplier, of both India and Pakistan.

## ENDNOTES

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<sup>&</sup>lt;sup>1</sup> Material in this chapter has been synthesized principally from: Ministry of Defence, "Chapter 8. Arms Control and Defence Industry," *Defence in a Democracy. White Paper on National Defence for the Republic of South Africa*, May 1996; Chris Barron, "SA's Arms Buyers Learn How to Call the Shots," *Sunday Times* (South Africa), May 24, 1998; Henry Ludski, "R25Bn Budget Draws Flak As Money for Repairs Dries Up," *Sunday Times* (South Africa), May 24, 1998; Chris Barron, "All the Big Guns Under One Roof," *Business Times* (South Africa), February 21, 1999; Madeleine Wackernagel, "Arms Industry: Use It Or Lose It," *Weekly Mail & Guardian*, February 20, 1999; Marion Edmunds, *Weekly Mail & Guardian*, March 29, 1999; Unattributed, "Sensitive Arms Deals to Stay Secret," *Weekly Mail & Guardian* February 7, 1997; Unattributed, "Armaments: SA Arms Industry Increases Exports 34%," *Weekly Mail & Guardian*, April 24, 1997; Unattributed, "India, S. Africa To Soon Finalise Defence Pacts," *Hindustan Times*, October 15, 1999; and Unattributed, "SA Keen on Defence JV's With India," *Times of India*, October 15, 1999; Other sources are also cited on specific points.

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- <sup>14</sup> La Franchi, op. cit., p. 31.
- <sup>15</sup> National Policy for the Defense Industry, quoted in Navias, op. cit., p. 523.
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